

Claims

- [c1] 1.An engine control method for a vehicle in which rotation of an internal combustion engine is transmitted to a driven wheel through a transmission system, said method comprising the steps of detecting during engine acceleration variations in the rotational state of a shaft, determining if the degree of change in rotational state variation is excessive and will cause difficulties in the transmission system, and restricting engine output if the degree of change in rotational state of a shaft is excessive.
- [c2] 2.An engine control method for a vehicle as set forth in claim 1 wherein the degree of change in rotational state of the engine rotational state is determined by measuring shaft speed on successive rotations.
- [c3] 3.An engine control method for a vehicle as set forth in claim 1 wherein the degree of change in rotational state of the engine rotational state is determined by measuring shaft speed during a portion of shaft rotation during successive cycles.
- [c4] 4.An engine control method for a vehicle as set forth in claim 3 wherein the successive cycles are a compression cycle and an exhaust cycle in a four cycle engine.
- [c5] 5.An engine control method for a vehicle as set forth in claim 1 wherein the degree of change in rotational state of the engine rotational state is both degree of rotational variation and rotational acceleration.
- [c6] 6.An engine control method for a vehicle as set forth in claim 1 wherein the degree of change in rotational state of the engine rotational state is determined by measuring the time interval during a fixed degree of shaft rotation and for a complete rotation including the measured fixed degree of shaft rotation.
- [c7] 7.An engine control method for a vehicle claim 1 wherein the engine output is varied by changing the spark timing.
- [c8] 8.An engine control method for a small vehicle as set forth in claim 7, wherein spark timing is changed by a time set in a timer.

- [c9] 9.An engine control method for a small vehicle according to claim 7, wherein the change of spark timing is feedback controlled such that acceleration of engine revolution will not exceed a set value.
- [c10] 10.An engine control method for a vehicle as set forth in claim 1 wherein the transmission system is comprised a clutch and a transmission and the avoided undesirable transmission system condition is clutch chattering.
- [c11] 11.A vehicle comprised of an internal combustion engine, a transmission system driven by said engine, a driven wheel driven by said transmission system and an engine control for detecting during engine acceleration variations in the rotational state of a shaft, determining if the degree of change in rotational state variation is excessive and will cause difficulties in the transmission and restricting engine output if the degree of change in rotational state of said shaft is excessive.
- [c12] 12.A vehicle as set forth in claim 11 wherein the transmission system comprised a clutch and a transmission and the avoided undesirable transmission system condition is clutch chattering.
- [c13] 13.A vehicle as set forth in claim 12 wherein the engine control determines the degree of change in rotational state of the engine rotational state by measuring shaft speed on successive rotations.
- [c14] 14.A vehicle as set forth in claim 12 wherein the engine control determines the degree of change in rotational state of the engine rotational state by measuring shaft speed during a portion of shaft rotation during successive cycles.
- [c15] 15.A vehicle as set forth in claim 14 wherein the successive cycles are a compression cycle and an exhaust cycle in a four cycle engine.
- [c16] 16.A vehicle as set forth in claim 12 wherein the engine control determines the degree of change in rotational state of the engine rotational state is both degree of rotational variation and rotational acceleration.
- [c17] 17.A vehicle as set forth in claim 12 wherein the engine control determines the degree of change in rotational state of the engine rotational state by measuring

the time interval during a fixed degree of shaft rotation and for a complete rotation including the measured fixed degree of shaft rotation.

[c18] 18.A vehicle as set forth in claim 17 wherein the engine output is varied by changing the spark timing.

[c19] 19.A vehicle as set forth in claim 18 wherein the spark timing is changed by a time set in a timer.

[c20] 20.A vehicle as set forth in claim 18 wherein the spark timing is feedback controlled such that acceleration of engine revolution will not exceed a set value.